



# CONSTRUCTION EQUIPMENT

## 2011 VOLVO L120G 31453 - DIESEL ENGINE



**Sample No:** VCP434342  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 2011



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP434342</b>   | VCP401786   | VCP393317   | VCP374953   |
| Sample Date   | <b>08 May 2024</b> | 22 Aug 2023 | 27 Apr 2023 | 13 Dec 2022 |
| Machine Hours | <b>13525</b>       | 12540       | 12120       | 11650       |
| Oil Hours     | <b>0</b>           | 0           | 500         | 500         |
| Oil Changed   | <b>Changed</b>     | Changed     | Changed     | Changed     |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C     | cSt      | <b>13.3</b> | 14.1 | 14.5 | 14.4 |
| Base Number (BN) | mg KOH/g | <b>10.7</b> | 11.3 | 9.8  | 11.3 |
| Oxidation (PA)   | %        | <b>85</b>   | 84   | 86   | 65   |

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### CONTAMINATION

|                |     |                |      |      |      |
|----------------|-----|----------------|------|------|------|
| Water          | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Soot %         | %   | <b>1.1</b>     | 1.4  | 1.7  | 0.1  |
| Nitration (PA) | %   | <b>75</b>      | 79   | 86   | 61   |
| Sulfation (PA) | %   | <b>66</b>      | 66   | 67   | 57   |
| Glycol         | %   | <b>NEG</b>     | NEG  | NEG  | NEG  |
| Fuel           | %   | <b>&lt;1.0</b> | <1.0 | <1.0 | <1.0 |
| Silicon        | ppm | <b>6</b>       | 6    | 6    | 5    |
| Sodium         | ppm | <b>2</b>       | 4    | 4    | 0    |
| Potassium      | ppm | <b>1</b>       | 1    | 2    | 3    |



### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>18</b>    | 17 | 24 | 21 |
| Copper     | ppm | <b>1</b>     | 1  | <1 | 1  |
| Lead       | ppm | <b>&lt;1</b> | 0  | 0  | <1 |
| Tin        | ppm | <b>1</b>     | <1 | <1 | <1 |
| Aluminum   | ppm | <b>4</b>     | 4  | 5  | 8  |
| Chromium   | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Molybdenum | ppm | <b>42</b>    | 39 | 40 | 44 |
| Nickel     | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Titanium   | ppm | <b>&lt;1</b> | 0  | <1 | <1 |
| Silver     | ppm | <b>0</b>     | 0  | 0  | <1 |
| Manganese  | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | 0  |



### ADDITIVES

|            |     |             |      |      |      |
|------------|-----|-------------|------|------|------|
| Calcium    | ppm | <b>1691</b> | 1949 | 1728 | 1951 |
| Magnesium  | ppm | <b>500</b>  | 517  | 501  | 518  |
| Zinc       | ppm | <b>1118</b> | 1279 | 1191 | 1263 |
| Phosphorus | ppm | <b>1035</b> | 1037 | 957  | 1087 |
| Barium     | ppm | <b>1</b>    | 0    | 0    | 0    |
| Boron      | ppm | <b>28</b>   | 38   | 32   | 42   |

**Depot:** LEOMAD  
**Unique No:** 11057085  
**Signed:** Wes Davis  
**Report Date:** 31 May 2024



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS

